Recommender system

Restaurants in Toronto

Problem Description

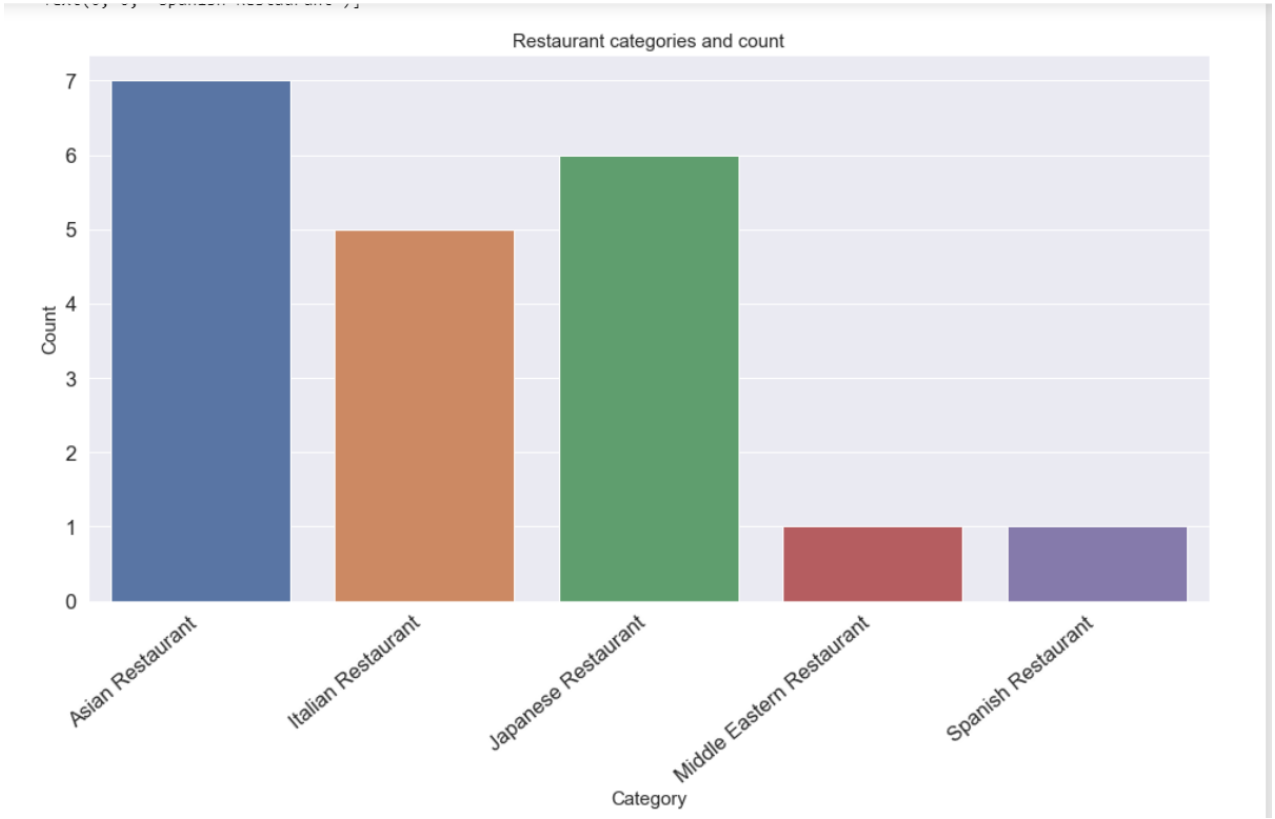
- Nowadays, recommender systems are used to personalize your experience on the web, telling you what to buy, where to eat or even who you should be friends with. People's tastes vary but generally follow patterns.
- A recommender system is a simple algorithm whose aim is to provide the most relevant information to a user by discovering patterns in a dataset.
- In this project, we build a recommender system to provide restaurant recommendation in the Toronto neighborhood based on their likings and past visits.

Data Description

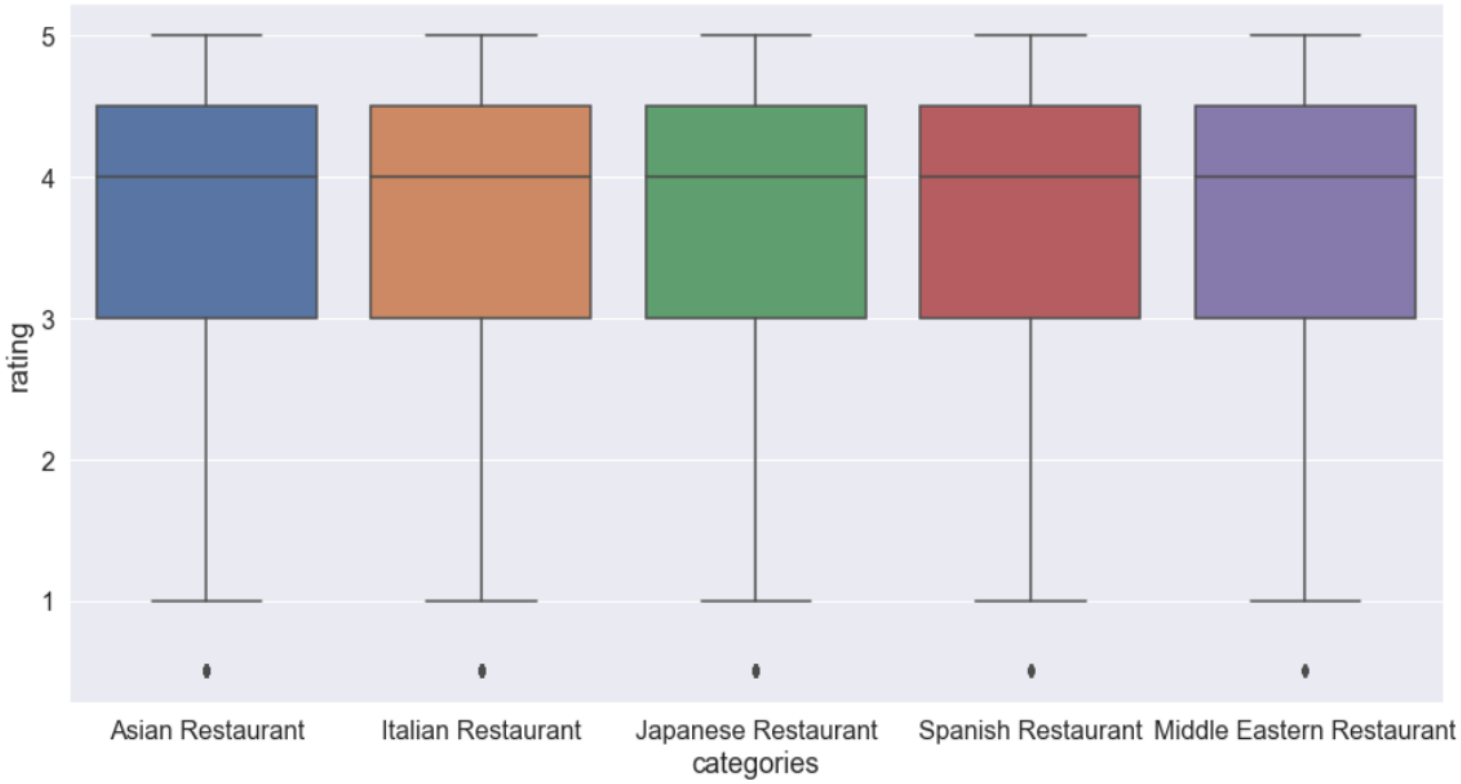
- Ratings data:
  - *userId* - the ID of the user who rated the restaurant.
  - *Restaurant_id* - the ID of the restaurant.
  - *rating* - The rating the user gave the restaurant, between 1 and 5.
  - *timestamp* - The time the restaurant was rated.
  - Restaurants data:
- *Id*- the ID of the restaurant.
  - *Venue* – Restaurant name
  - *Neighborhood* – the neighborhood where the restaurant is located
  - *Venue Longitude* – Longitude data of the restaurant
  - *Venue Latitude* – Longitude data of the restaurant
  - *Category* – Restaurant category

Data Exploration

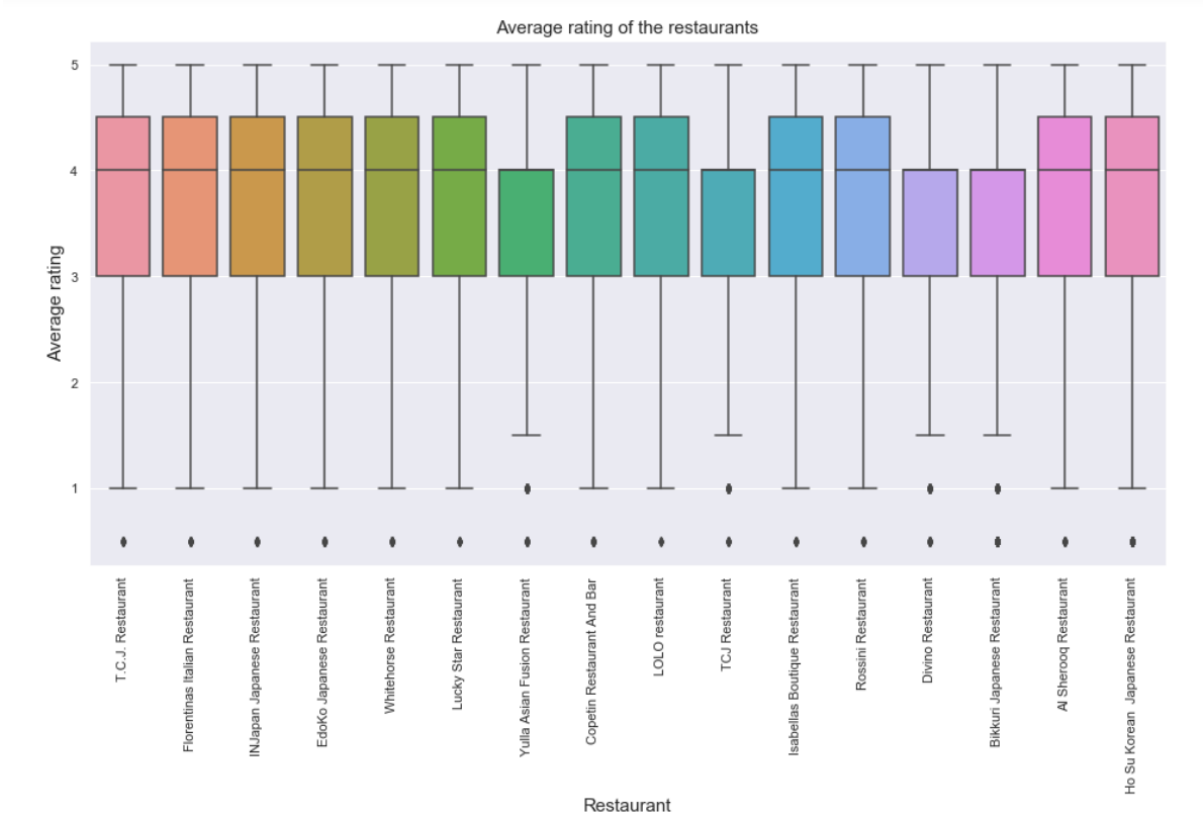
Categories of the restaurants and number of restaurants in each category



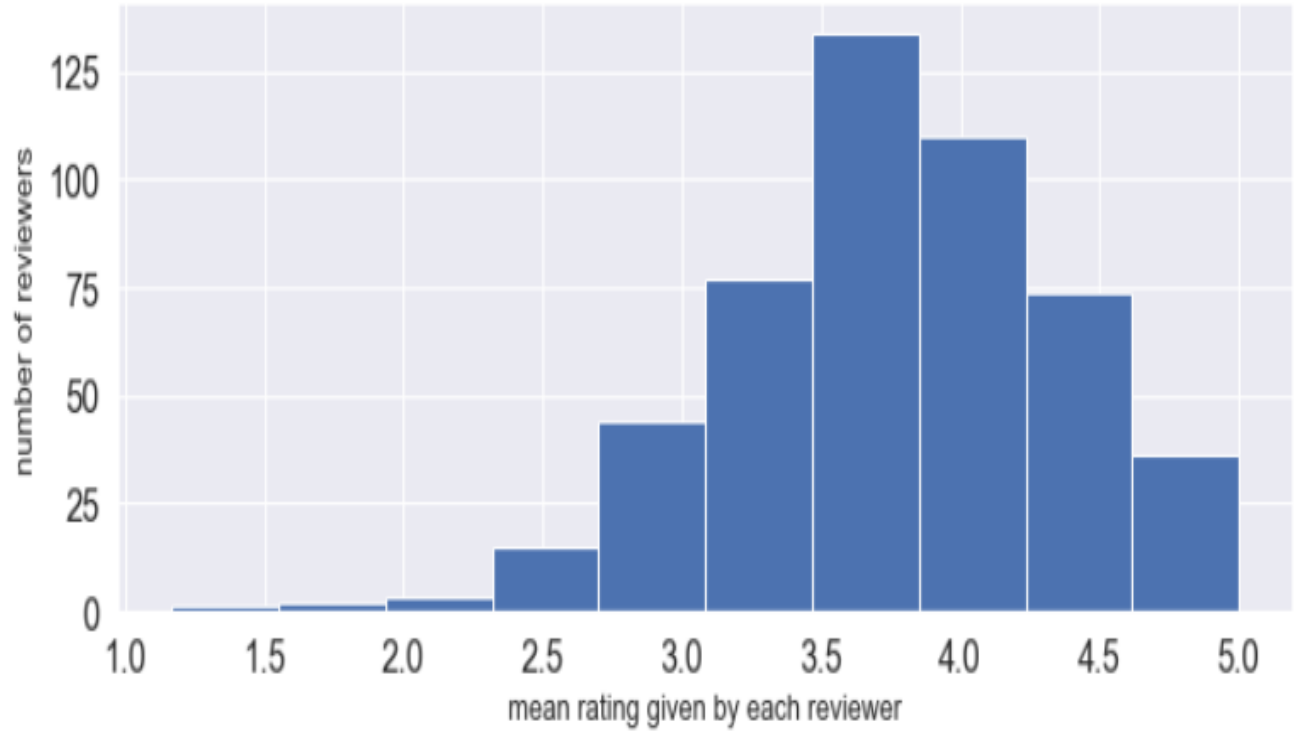
Average rating of all the restaurants by category



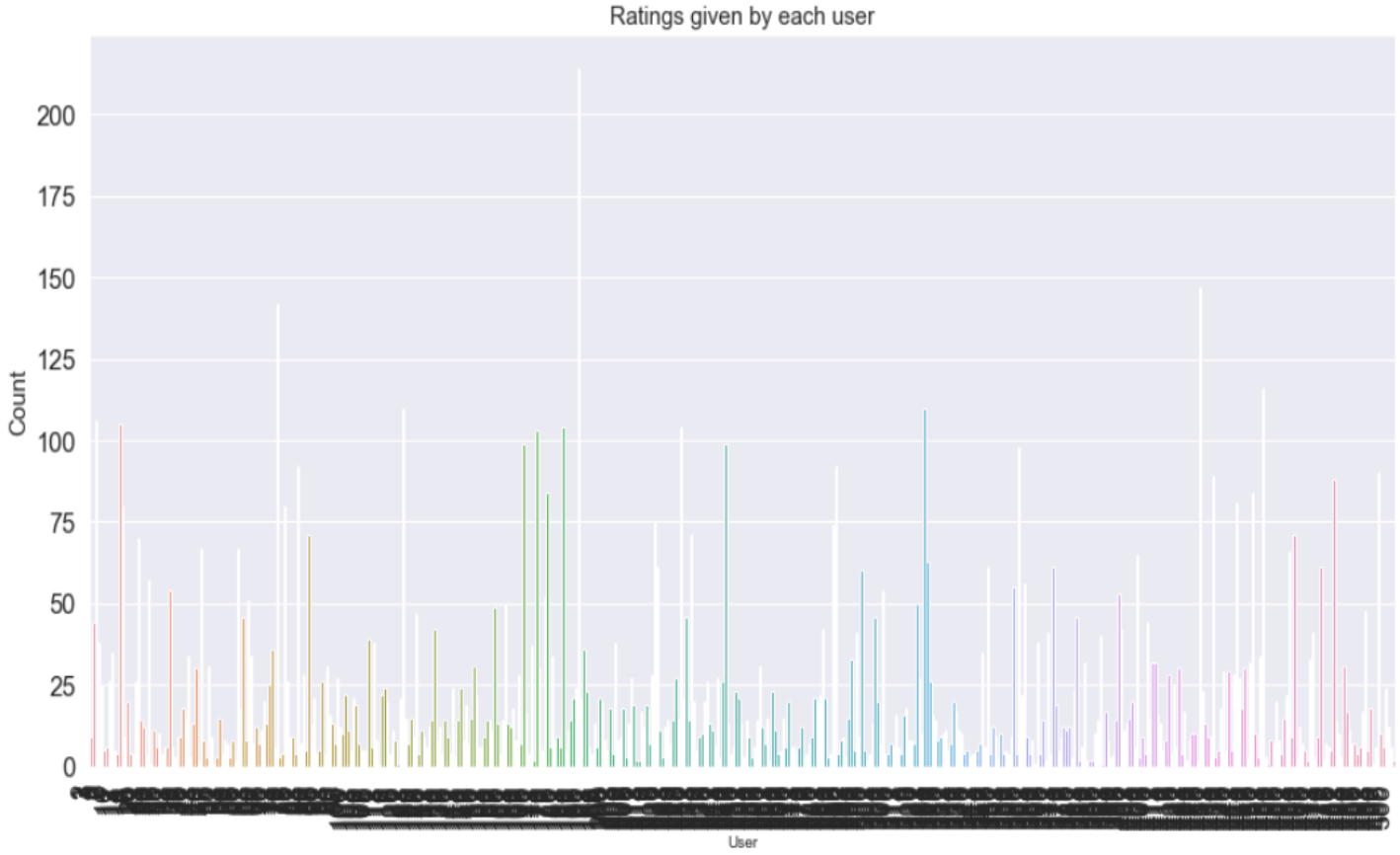
Average rating of all the restaurants by each restaurant



Mean rating distribution given by each user



Rating given by all users



Results – find similar users

1: User 472, with similarity of 0.9476609356270141
2: User 162, with similarity of 0.7700769315417864
3: User 83, with similarity of 0.6798734977619258
4: User 135, with similarity of 0.6767587118081178